

WMD220 UF150 55

Hollow fiber ultrafiltration module for water and
wastewater applications



WMD220 UF150 55

General Information

The WMD220 UF150 55 ultrafiltration module is used for potable water production, RO pretreatment, municipal and industrial wastewater treatment. These modules excel in removing turbidity, suspended solids, and virus and bacteria. The modules offer outstanding pH and chlorine resistance, excellent mechanical strength of the fibers, and improved fouling behaviour compared to existing ultrafiltration membranes. The WMD220 UF150 55 modules can be mounted vertically or installed horizontally in pressure vessels.

Membrane characteristics

Membrane material	Modified PES
Membrane fiber inner diameter	0.8 mm (0.031")
Pore size	0.02 µm
MWCO ¹	150 kDa
Filtration mode	Inside-Out; Vertical or horizontal
Operation mode	Dead-end or cross-flow

Operating Conditions

Typical flux	50 – 100 l/m ² /h (30 – 60 gfd)
Backwash flux	100 – 250 l/m ² /h (60 - 150 gfd)
Max. system pressure (installation with end caps)	3 bar (44 psi)
Max. system pressure (installation in pressure vessels)	Refer to specifications of pressure vessel supplier.
Max. filtration transmembrane pressure (installation with end caps)	1.5 bar (22 psi)
Max. filtration transmembrane pressure (installation in pressure vessels)	1 bar (15 psi)
Max. backwash pressure	3 bar (44 psi)
Max. active chlorine concentration	500 ppm @ pH>10
Max. cumulative active chlorine exposure	250,000 ppm-hours @ pH>10
Max. particle size	200 µm
Max. TSS	200 ppm
Max. turbidity	100 NTU
Max. Temperature during operation & cleaning	40°C (104°F)
pH range during operation	2-12
pH range during cleaning	1-13

¹ Molecular Weight Cut Off (MWCO) is an estimation as it depends on size, shape, charge and polarity of the compound being tested, as well as test conditions. Measured with dextran.

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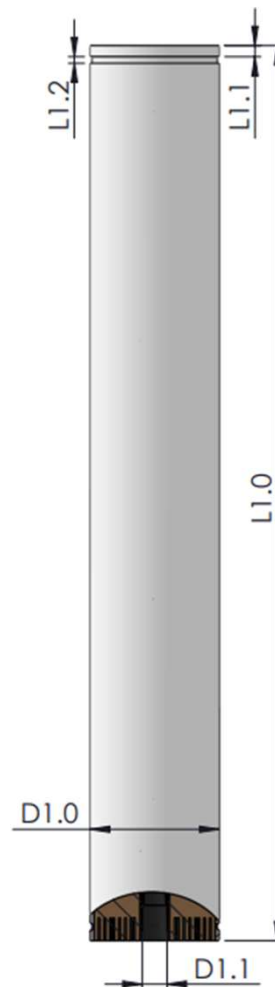
Module Specification

Materials of Construction

Housing	PVC-U
Internals	PP/engineering plastic
Potting	Epoxy resin

Dimensions

Membrane Surface Area	55 m ²
L1.0	1537.5 mm (60.5")
L1.1	19.1 mm (0.75")
L1.2	11.1 mm (0.44")
D1.0	220 mm (8.7")
D1.1	42.6 mm (1.7")



Available Module type

WMD220 UF150 55

Product-Code	ELEUF0026
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Storage Information

New modules in original packaging can be stored for max. 1 year from shipping date in a dry place, protected from sunlight or any heat source, at temperatures between 1 and 40°C (33 and 104°F);

Ex-factory storage solution: 84wt% water, 15wt% glycerin and 1wt% sodium metabisulfite;

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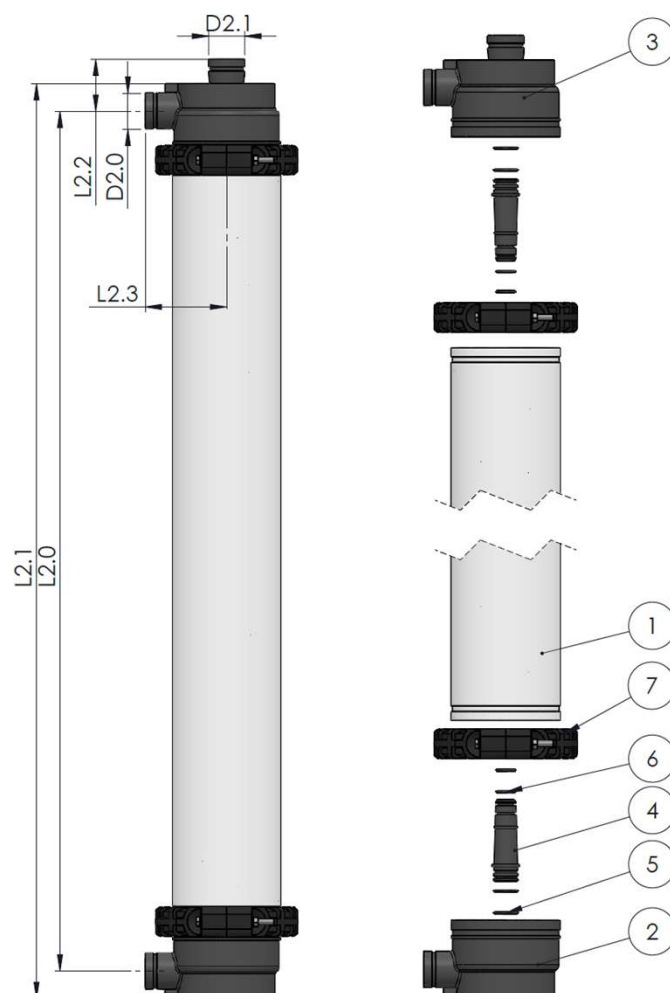
Connection Configuration – Vertical

Dimensions

L2.0	1740 mm (68.52")
L2.1	1852 mm (72.89")
L2.2	105 mm (4.13")
L2.3	165 mm (6.50")
D2.0	2.5" groove
D2.1	2.5" groove

Assembly Components

(1)	WMD220 UF Module
(2)	End Cap Groove 8" Non-Ported
(3)	End Cap Groove 8" Ported
(4)	UF Groove permeate connector
(5)	O-ring EPDM Ø40.8x4.6 mm
(6)	O-ring EPDM Ø32x4.5 mm
(7)	75N Nylon Flexible Coupling DN200 8"



Available Set (Components 1-7)

WMD220 UF150 55 Vertical Set

Set-Code	SETUF0039
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Connection Configuration – Horizontal

WMD220 UF150 55 ultrafiltration modules can be installed horizontally in pressure vessels. For the installation, two spacer rings per module are required, along with permeate interconnectors. Two spacer rings and one interconnector are supplied with every module.

Available Set (including 2 spacer rings and 1 interconnector)

WMD220 UF150 55 Horizontal Set

Set-Code	SETUF0040
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WMD220 UF150 55

Weight Information

Weight	WMD220 UF150 55 Horizontal Set	WMD220 UF150 55 Vertical Set
Empty weight Module (without assembly components)	32 kg (70.5 lbs)	32 kg (70.5 lbs)
Empty weight Module including assembly components	32.5 kg (71.5 lbs)	41 kg (90 lbs)
Filled Module including assembly components	64.5 kg (142.5 lbs)	79 kg (174 lbs)

Shipping Information

Each module is individually packed in a vacuum sealed plastic bag. For small quantities, modules and assembly components are shipped in separate cardboard boxes:

- Shipping weight per module: 40 kg (88 lbs.);
- Shipping weight per horizontal assembly (2 spacer rings + permeate interconnector): 1.5 kg (3 lbs.);
- Shipping weight per vertical end cap assembly (2 end caps + grooved couplings): 10 kg (22 lbs.);

For large shipments, modules are loaded in a wooden crate with a max. of 20 modules per crate:

- Crate dimensions: 100 x 125 x 173 cm; 40 x 50 x 68 in (L x W x H);
- Shipping weight per crate (20 modules), excl. assembly components: 700 kg (1543 lbs.)

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